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| **Name:** Theresa Law | | **Grade Level**: Second Grade |
| **Lesson Topic:** Observing Brassica Plants: Compost Soil versus Regular Soil | | |
| **Content :** Students will observe and record the effects of worm compost on the germination of Brassica seeds and the growth of the plants | | |
| **Materials**:   * Rulers * Connecting Cubes will use as a tool to measure height * Magnifying glasses * 'Plants in Compost' Worksheet * Science Notebook | | |
| **Learning Background**   * Students have learned that much of the materials people throw away can be reuse, composted, or recycled and anything is that biodegradable can be compost * Students understand what compost is and how to make their own. * Students understand the benefits of reusing materials. Instead of using materials provided by Foss Kit, they are using plastic water bottles as planters Plastic Bottle Planters | | |
| **Lesson Objectives:**   * Students will learn how plants benefit from compost soil | | |
| **Skills/Strategies**   * Observe and describe how plants grow LE 2.1 a * Observe plant life cycles and life spans LE 4.1a,b,c,d * Observe that plants reproduce from: seeds, bulbs and cuttings LE 4.1 a,b,d * Observe that plants respond to changes in their environment LE 5.2a  **DANIELSON FRAMEWORK:** 1d Demonstrating Knowledge of Resources 3C Engaging Students in Learning | **Students will be expected to know:**   * the benefit of compost and the uses of compost: 1. compost increase the soil's ability to hold water   2. help soil to achieve good airflow  3. adds nutrients for plants  **Key terms/Vocabulary**   * compost * food scraps * germination * nutrients * data | |
| **Hands-on Activity:**   * Students will measure the growth of Brassica Plants and record their observations. | | |
| **Lesson Outline:**   * Briefly review of what the students have done so far:  *Day 1* Analyzed Brassica seeds *Day 2* Planted Brassica seeds in three separate planters: Planter #1: soil provided by Foss Kit; Planter #2 a mixture of compost soil and Foss Kit soil; Planter #3 Compost Soil *Day 3* Hypothesized how the soil from Foss Kit and soil from compost will affect the plant's growth, "Which soil mix will sprout the most seeds? Which will grow the fastest? Why?" * Teacher say " One week has passed we are going to work with our partners and observe our plants" * Students work with their partners and examine the progress of the seeds, sprouts, or plants-- depending when the seeds germinate. They will use rulers and connecting cubes to measure the growth * Students will complete individual worksheet; recording the numbers of seeds sprouted and growth *Below is a sample what the worksheet will look like*  |  |  |  | | --- | --- | --- | | **Sprouting** | **Date** | **Number of Seeds Sprouted** | | Foss Kit Soil |  |  | | Compost mix with Foss Kit Soil |  |  | | Compost Soil |  |  |      |  |  |  | | --- | --- | --- | | **Growth Observation 1** | **Date** | **Height** | | Foss Kit Soil |  |  | | Compost mix with Foss Kit Soil |  |  | | Compost Soil |  |  |  |  |  |  | | --- | --- | --- | | **Growth Observation 2** | **Date** | **Height** | | Foss Kit Soil |  |  | | Compost mix with Foss Kit Soil |  |  | | Compost Soil |  |  |  * In their science notebooks, students will sketch a picture of the plants in their notebooks * They will continue to measure the height of the plants and record any new data every few days. * After three weeks, students will examine the data they have gather and answer the following questions in their science notebooks: Which planter grew the tallest plants? Which one looks the healthiest? Why? | | |
| **Assessment Method**  When reading students' reflections, I will use a checklist   |  |  |  | | --- | --- | --- | | Name | Explain why the two Brassica plants look different | List 2+ reasons why compost is good for plants | | Anna | 🗸 | 🗸 | | Brian |  |  | | | |
| **Conclusion**   * Students will share their observation with the class * Homework Assignment: Share with one family member what they learned today in our Brassica Project * Students will continue to observe the Brassica plants as they grow flowers/seedpods   **Take Home Activity**   * Students can take the seeds from Brassica's seedpods and replant them in their own home; reusing plastic water bottlers as planter. They will given a ziploc bag of compost soil as well. | | |